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" THE JOURNAL "

Official Organ of the

AUSTRALIAN MODEL RAILWAY ASSOCIATION

For All Who Are Interested in Scale
Model Railroading

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-Member Australian Standards Association-

Affiliated with the Australian Association of
Model Societies.

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EDITORIAL

Everything must have a beginning and a place from whence it springs, and it so happened that the genesis of the AMRA was Victoria, but it cannot be stressed too often or too deeply that the Aims and Objects of this organization are Nationwide. Any member of the Management Committee, serving for the pure love of the game, would have been only too happy had New South Wales or Queensland, South Australia or any other State been the place of origin of this Idea to weld the modellers of this country into one composite body. Our membership is now climbing to the first hundred mark and one of our latest recruits hails from the Apple Isle - good on you, Tassie!

Now the 'stick is off' in the formation of State Branches by the inaugural meeting of the (AGAIN) Victorian State Branch. We have twice given the lead, you Interstate chaps, and now we are waiting developments to see which State will be the next to form its own State Branch, with its own Elected State Chairman and Secretary to control, within the general framework of AMRA policy, its own domestic doings and activities. A further step toward national strength has been the acceptance by, and appointment of, State Representatives, and it would appear logical to expect these members to be the sources of the initial activities in the establishment of these State Branches, or as their very nature will make them, Clubs.

If each State Representative will contact the members in his own State and get them together - meeting in their own homes, perhaps in rotation - as a start, the seeds will have been sown and the All-Important START will have been MADE. No matter how few the members in your State, will you, dear Rep, get in touch with them and have this vital step taken? From then on your Branch will grow, slowly perhaps but steadily, depending after all on the initial vigor applied to the happy task by its Chairman and Secretary

VISITS TO VICTORIAN RAILWAYS

Through the goodwill of MR. T. Collier, Asst. Chief Traffic Manager, Victorian Railways, two organized visits have been paid to the Nth. Melbourne area railway establishments. The first with 23 members attending on the 26th October last and the most recent with 22 on 25th January. Both trips were due to the enthusiasm of Jack Chaplin who is a Shunter at the Yards. Jack was actually "knocking off work to lay bricks", but he probably enjoyed both days as much as the most ardent fan.

First section inspected comprised the Carsheds where we saw through the modern cars of the Overland, just in from Adelaide, with their Roomettes and Twinettes as highlights. Even the poor old all-night Sitters-uppers do it reclining on aircraft-type seats which look most inviting. The upholstery and general fitting-out is all that the most fastidious would wish. When that day dawns - when I can afford a trip to Adelaide, I shall try-out this train instead of flying as I had intended!

We then had the car generating and lighting systems of the older type stock explained to us by a mechanic who went to some trouble to show us various tests on their switchboards, built reliably years ago by the English firm of Stones who, I was reading not so long ago, claim to have installed the first electric lighting system on a train in England, if not the world.

As we left the Car Depots it was but a few minutes to the arrival time of the 'Spirit' (known amongst Railwaymen, Jack told us, as 'The Blue'), so we waited by the side of the tracks where she would pass, and sure enough she was on time, and every chap gave her one negative at least.

We crossed the tracks and waited until the cars returned, this time in reverse and in charge of one of the new 'F' class diesel-electric shunting locos, by English Electric. Although a mere 350HP with only two traction motors, one geared to each of the outer of the three axles, she handled the long, heavy steel train comfortably, doing the job previously allotted to the 'D' class tanks of the old steam suburban days. After this gleaming procession had passed from our sight around the Nth. Melbourne reversing loop, Jack piloted us over to his particular domain on the Goods Reception and Gravitation roads on which freight from all over the State is received, and the rakes of vehicles "broken up" on the various roads for remark-shalling.

Next move was to Dudley St. Signal Box which handles the goods traffic to the roads we had just inspected. Whilst here we had the "drop" on the double-headed diesel freight from Serviceton which passed right beneath us to the Reception Road, and once again cameras were on the job to some order. Signalbox working, the busier the better, is most interesting to watch, and we were most reluctant to leave, but we did so to surmount the Coaling Stage and then the Loco. Sidings lying further on. Here it was possible to spend any amount of time, as practically all types of locos were present, (on the first visit even the elusive H220), and 'R's' were laid on.

Then to the Sanctum Sanctorum, the running shed of the Clyde-G.M. diesels, the 'B' class mainliners. Here we went through them, under them, round them and to get roof shots (off the sanding-plant structure), over them! The mechanics on duty were most helpful, and went to no end of trouble explaining, to the accompanying roar of the 2-stroke motor, the operation of the relays to each movement of the handle through the eight notches of the control pedestal. It would be safe to say that the unexpressed wish of the rail-

fane there would be somewhat along the lines of the Commissioners writing a new Regulation into their General Appendix to the effect that a body of accredited railway enthusiasts could make written application for a specified number to make pre-arranged trips - say on the freight runs - behind the crew of one of these splendid machines! It would be well worth the price of a ticket to stand all the way!! But back to reality and the Diesel running Shed, another spot from which it was indeed difficult to prise one's self away.

From here to our last point of interest for the day, the Loco Sheds, where on each occasion we were in time to see a loco leave a stall, move onto the turntable with a great, hearty clank of wheels, and slowly move through the building, its steam forming dramatic patterns against the light streaming down through the open centre roof section.

The feet now dragged rather heavily back to the locomotive hut where we had left our dunnage, but no one would have missed a single item of the itinerary. All here joined in informally thanking Jack for a most interesting day, and asking him to pass on to Mr Collier personally, our appreciation, even though our Secretary was to do so officially. Yes, Mr Collier, we have had two very excellent days thanks to your kindness and understanding. And now, Mr Collier has suggested to Jack that the members may wish to see over the Newport Workshop yards! Members can hardly wait for the tentative date of the 29th March. This visit, if possible, would be of even more interest than the previous two as the old out-of-service locos not broken up are held in these yards. And with all the other points of interest over this amazing layout members should have a real 'field day', especially as there is no restriction on the use of cameras.

FIRST STATE BRANCH FORMED

Friday, 27th February, 1953, was a historic night for the AMRA as it marked the commencement of a new activity of the Association, that of the inauguration of the first State Branch, or member's Club.

To open the meeting AMRA's President Mayer Levy and Secretary Tim Dunlop occupied the chairs, whilst the President declared the meeting open and read the concise Regulations governing the formation of State Branches. Nominations were then called for the position of State Chairman, and one and all were hearty in their acclamation of Rick Richardson to whom the honour, and responsibility, fell. It was most gratifying to the members of the Management Committee to see Rick's popularity thus endorsed, if for no other reason than the amount of spade work he put in with our indefatigable Secretary, Tim Dunlop, to get this organization established. Mayer's face was wreathed in smiles as he shook Rick's hand and welcomed him to the Chair. Rick then thanked the members for their expression of confidence in him and proceeded with the business of State Secretary/Treasurer.

This became a close run between Ray Pearson, (still with the bloom of his Adelaide trip upon him) and Charlie Craig. Ray decided the issue by finally declining, upon the grounds of being a professional model man (even though perfectly eligible for the position) and Charles was elected, another most popular choice.

Rick then noted that the formation of this Branch, or Club, as such, was the idea of Ray Pearson, and Ray's pleasure at the fulfilment of his dream was apparent.

An apology was received from Jack Richardson

of Electric Traction Publications, but Jack more than made up for his unavoidable absence by offering to publicise the Branch in his periodicals. Many thanks, Jack. Other apologies received were from Nev. Levin and Jack Fox, whilst Geoff Lormer found it impossible to attend, likewise Allan Houston and Herbert Tisher.

The meeting then settled down to a discussion of topics, some of which were:

- A Picture Night to raise the necessary small funds for postage, stationery, etcetera.

- Ray Pearson offered to donate a prize for some competition to be decided upon.

- Dave Cross suggested a Drawbar-pulling contest, a variation on which someone suggested "HO" versus "O" ----.

- Another idea for a Club night had one thinking in terms of baseball face guards, cricket pads and American gridiron shoulder pads as the topic mooted for an evening was "The Battle of the Gauges".

- A suggestion by Ron Mennie was acted upon for the next meeting on 27th March, namely, that a few members tell the meeting, demonstrating if possible, just how they go about the job when building their stock, the idea being that each chap is bound to have some wrinkle of which the others had not thought.

- Yet another suggestion was to have all the local professional model men to a sort of round table conference (or inquisitorial) at which they would display some new item of real interest

and be prepared to answer all manner of pertinent questions flung at them.

• "Then", cried a voice, "what about an Arm-chair Specialist's Night with all the blokes who have big ideas on what to do but so far have done very little about them?" They would be given every opportunity to propound their theories - yes, it would be the 'Night of the Gunna Bloke' - gunna do this, gunna do that-----!!

-I'd qualify for Chairman of this one! -Ed.

• Rick had a good proposal--that the AMRA Branch ask the VMRS and NMRA chaps over to a Get Together Night; this could have very happy outcomes for all bodies.

• It was also proposed and seconded onto the Minutes of the Meeting that it become a Rule - similar to that operating at VMRS meetings - that models on display be NOT handled unless with the owner's consent.

• It was decided Branch meetings be held on the 4th Friday of the month, the next meeting being the 27th March, 1953.

Amongst the scale models on the Chairman's table was one of probably the only O-4-O Mallet in existence - Dave Gross' Dad's carpenters mallet embellished with stack, cab, superheater, pilot etc., and four wheeled truck beneath. When pushed, it actually moved on its track and remained upright! Its actual function was as the Chairman's gavel.

This closed the formal part of the meeting which right through had had a most happy atmosphere auguring well for the future. The members then adjourned for supper prepared by the kindness of Mrs Ernie Dean.

a gesture appreciated by all, and it was noted that Brian McClure did an excellent job with the tea towel. During and after supper everyone nattered over the splendid models brought along by the real enthusiasts.

As a record of this First Night of the new State Branch here is the list of those who attended:

Mayer Levy	Tim Dunlop
Rick Richardson	Charlie Craig
Ernie Dean	Dave Gross
Russ Siddall	Jack Chaplin
Ray Perry	Ray Pearson
Dave Bennett	Howard Groome
Brian McClure	Bob Smith
Ron Mennie	Bill Derbyshire (Visitor)
Fred Youie	Bill Rattray
Phil Avar	G. Wateford
Jack May	

-o-

The first State Branch has now been formed, and all that remains is for all other States to do likewise, thus affording the opportunity for members all over the Commonwealth to actively come together with all the benefits that such intermingling and exchange of ideas will bring.

Marshal up - chaps!!

HANDY HINT - MODEL LETTERING by Ern Mainka.

To number model railway sidings, switches, sections, etc., I cut numbers from a wall calendar. Calendars come in a variety of figures, styles, colors and sizes. One calendar would provide more than sufficient numbers for the average model railway.

TOSS ASIDE YOUR TINSNIPS -- Part Four

By C Richardson

It's more than twelve months since the previous article in this series was written, so instead of continuing with a discussion on glues and gluing as mentioned in the closing paragraph of that last article, we'll get the roof on that much discussed boxcar and touch on several other aspects of construction. Cleaning up these odds and ends will clear the decks for a discourse on "stickum and how to stick it" in the next issue.

There are two basic methods of forming a boxcar roof the choice of which to use depending on the type or shape in cross-section of the roof, and to some extent on your own inclinations. Both methods entail about the same amount of work, and for finished appearance are on a par, but the 'solid block' roof we discuss first has a slight disadvantage in placing a fairly large mass of wood high up on the car, and could tend to make a lightly constructed vehicle a little top heavy. A balsa block would do the job, but soft balsa is the very devil to plane, particularly for the novice. Hard balsa eliminates that problem to a great extent, but the harder the balsa the heavier it becomes, and it isn't the easiest stuff to paint, remembering that this is the roof, right in full view all the time. Anyway, a solid lump of balsa for an 'O' gauge car roof would be fairly expensive these days.

Let's assume your boxcar is gable-roofed and has been built from the materials suggested earlier, in which case it won't be top heavy with a roof of solid pine. Plane a piece of clean grained soft pine to fit flush with the sides and ends of the car body. Now mark the shape, (in cross section) of the roof on

the ends of the block and plane the block down to the correct thickness. Draw a centre-line lengthwise along the upper side of the block and plane the roof to the shape previously marked on the ends. All three lines should be still just visible when you have finished, particularly the gable line. If they are not you've been a bit enthusiastic with the plane, palo! You had better get busy with the triangle to see "what's missing where."

No doubt you will complain that the foregoing is all very well, but how is the block to be held while planing it down to "nothing" along the two long sides? Very often a gable roofed vehicle has a kind of shoulder where the roof joins the side walls, this shoulder giving just enough wood to be gripped in a vice while the roof is shaped. If the roof does meet the sides in a sharp corner screw a similar sized piece of wood to the underside of the roof block, shape the roof down to the required knife edges, then remove the temporary block. This block has the additional advantage of providing support for the thin edges of the roof during planing as well as being a means of holding the work in the vise.

Perhaps the most obvious method of holding the roof block is to glue it in place on the car body, then put the body itself in the vise, and proceed. This is particularly suited to "wagon-top" or "turtle back" roof types where the roof and walls flow together in an almost unbroken quarter circle, but do not forget that handrails, ladders, brake-wheel columns and suchlike that may require fixing from the inside of a closed car must be fitted in place before permanently attaching the roof. Small blocks of scrap wood can easily be arranged between these details to protect them from damage when the body is gripped in the vise.

Before fixing any type of roof it is good practice to glue an $\frac{1}{8}$ " x $\frac{1}{8}$ " balsa beading around the inside top of the walls. This will give an extra width of glueing surface on the top edges of the walls for the roof pieces, and while you are at it run some of the same stuff down each of the four inside corners for extra strength.

Make a habit of drilling a series of 1/16" dia airvents somewhere in an all-enclosed vehicle. Under the roofwalk is a good spot on American prototypes, and close to the sides underneath the floor is O.K. if the model doesn't carry roofwalks. There are 2 reasons for making these airholes. First, if cellulose cement is locked inside an airtight body of hardwood it may remain semi-plastic for days instead of setting hard in about an hour. Result! You just get the roof nicely shaped and are vigorously sanding down those last little bumps when, bingo! the still soft glue 'let's go' and the roof pulls away from the body. Happy Days!!

Furthermore, most Australian model railways are built in some kind of unlined shed or garage, where-in the occupants (and the railway) fry in summer and freeze in winter. Consider what is likely to happen to a hermetically sealed boxcar or carriage or line-side building standing in a general atmosphere around the 100° mark. Comes a sudden cool change and the mercury tumbles 30° in as many minutes. Wood and cardboard are good heat insulators so the air trapped inside the model remains near the upper 90° mark possibly for 2 or 3 hours while the general temperature may be down in the 60's. Too much of that kind of thing can eventually twist or split the most carefully constructed model into a candidate for the scrap-pile. So give the model a chance by drilling some breather holes in the body.

Perhaps you don't feel too sure of the mysterious mechanics of the plane, in which case form the roof with bulkheads and a covering of thin wood. First cut a master pattern in cardboard of the cross-section of the roof (you get this cross-section from the end view on your plan). Snip the pattern until it is a nice fit across the roof, but allow for the thickness of the roof skin particularly at the point where the actual roof covering meets the side walls. Leave enough material on the pattern to let the bulkhead project about $3/4"$ down between the side walls, notching each end of the bulkhead where it rests on the walls. Now use this cardboard template to make enough copies in $1/8"$ balsa to put a bulkhead about every 2' in an 8' gauge body. Always make repetition parts (such as bulkheads) by pinning the 4 or 5 blanks of balsa together and cutting and shaping them all at the one time. This assures they are all alike, whereas if they are cut individually they are certain to vary just enough to make the roof out of true somewhere along its length.

Glue the bulkheads in place and then run a $3/16" \times 3/8"$ length of balsa along the ridge line. A curved roof doesn't require this centre stringer. Notch each bulkhead to allow this stringer to seat down flush or cut the stringer into sections and glue it between each bulkhead. To complete the roof cut and glue in place the two sides, butting them tightly together at the apex where the two meeting edges may require a little paring to accomplish a close fit.

If the roof is a curved one, cut a piece of wood somewhat oversize to allow for the eventual curve, then hold one side of the sheet of wood over the steam from a boiling kettle. The wood will promptly curl into a gentle arc, probably without any assistance from you at all. $1/16"$ spruce sheet

is ideal for this type of roof, with 1m m. thick plywood as second choice. If you use millimetre ply it will need a bit of working to shape with the fingers, and it is also necessary to steam both sides of the sheet, turning it from face to face every few seconds. Only an approximately correct curve is required, and when its near enough glue all the bulkheads and tops of the walls and clap the roof in place holding it to a close fit all around with temporary pins or rubber bands (or both) until the glue sets. Then pare and sandpaper away any excess overhang at the edges.

It is quite easy to force a dry sheet of thin wood or plywood to follow the fairly gentle curve of most freight car roofs, but a 'dry' bend will always spring away again if for any reason the glue gives way, as is possible under the extreme weather conditions mentioned previously, or if the model is accidentally dropped. However, a roof embodying a steam bent curve will always remain close fitting even if the adhesive 'let's go' in places, merely because the wood is not under any stress, as a 'dry' bent curve is.

Spruce is a timber which takes a steam bend with remarkable ease. It is possible to coax an actual loose knot in a long thin strip of selected spruce, providing this bit of admittedly useless tomfoolery is completely carried out in the steam from a hard boiling kettle, and I mean the steam 1/2" from the spout, not the clouds of water vapour the invisible steam soon becomes in the atmosphere.

As previously mentioned, 'millimetre' plywood can also be steam bent to fit a curved roof, mainly because this thin, tough material is usually resin-bonded and therefore waterproof. If you try this idea out on ordinary 3/16" thick hoop pine ply you'll finish up with 3 sheets of wood 1/16" thick, for the glue holding the laminations together will promptly

'unset' in the hot steam.

A word of warning before you nick off to try your skill as a steam bender of wood. Steam (or the visible water vapour) from a boiling kettle looks pretty innocuous stuff, but can give the unwary soul an unexpectedly nasty scald as any housewife will agree. Canvas gardening gloves are good protection from momentary exposure to steam, but make certain the undersides of your wrists are protected, for they seem to scald particularly easily. If you do get a scald of any consequence, smear the area thickly - and quickly - with a thick paste of bicarbonate of soda and cold water to ease the pain and exclude the air, then go to your doctor or chemist, immediately. Do not put oil of any kind on the scald, and don't bandage tightly. The foregoing may seem out of place in such an article, but quite a few youngsters read these Journals, and a bad steam scald is a most painful and slow-healing affliction.

All that remains to be done to complete the bodywork of our boxcar body is to model the metal strapping and angles usually visible at various stress points on a full-sized wood-sheathed car, or over the metal seams in many types of all-metal vehicles. This ~~ironwork~~ is easily simulated with thin strips of light card or thickish paper, rivet impressed if necessary, and glued in place. Form small groups and rows of rivets by the method described in an earlier chapter, but where a whole line of rivets appears in a long strip or angle of metal, make them with the aid of a typewriter.

Put the sheet of light card or paper in the typewriter, and using the fullstop 'dot' type the row of rivets into the paper, then cut off the rivetted strip with a razor blade along a steel

straight edge. If a rivetted angle must be simulated like those often seen down an exterior corner, type 2 parallel rows of rivets then crease the paper sharply along the edge of a steel rule laid between the 2 lines of rivets. Only then cut the piece away from the main body of the sheet of card, or paper. Don't attempt to form the angle round the actual vehicle corner without this preliminary crease, because even if you manage to neatly bend the paper round the corner and keep it stuck down, which is unlikely, this will produce a rounded rather than a sharp 'square cornered' angle. And in any event the rivet impressions in the strip are sure to be partly obliterated in the tussle to form a right angle in the paper.

Use cellulose cement, (aircraft cement), for sticking most of the paper detailing in place, although Pliobond is a good standby for the difficult spots where the stiffness of the strip tends to make it pull away before the cement has set. 'Pliobond' is a 'sticky' sticker and will just about hang onto anything once it starts to set. (About 3 minutes)

While we are on the subject of paper, it's worth mentioning that this everyday commodity will take an exceptionally fine paint finish without much, if any, prior preparation. A direct application of this knowledge for the beginner is in the 'surfacing' of balsa wood, for unless you have had some previous experience of painting this wood, you are likely to make rather a mess of the job, and I would strongly suggest you avoid the use of balsa at any place in a model where it will subsequently be painted. If for some reason you must use balsa and aren't too familiar with paint in relation to models, cover the balsa by pasting or glueing paper over the area. Use good quality paper, not too thick, that found in the average 'writing tablet' being O.K. providing it isn't the very thin 'Airmail' type.

If you use paste or a water-based glue to apply the paper, paint it on both the paper and the wood surface. The former to swell the paper before it is applied so it won't wrinkle on the work, the latter so that the dry wood won't immediately suck the water content out of the pasted paper. If you use any one of the volatile gums, glues and cements on the market, it doesn't make much difference on which surface you apply it, providing you are reasonably generous with the stuff, for these latter adhesives have no swelling effect on the paper. Personally, I usually use "Glutex" liquid glue for this type of "broad" sticking work, but you will probably have your own favourite brand of "goo" that has been used in your household for years for general house use.

Whatever you use as an adhesive, pay particular attention to the edges of the paper, which have an irritating habit of laying innocently flat until painting operations are commenced, then promptly curling away from the wood surface as soon as the paint begins to dry. This won't happen, of course, if they are properly glued down. Incidentally, you will be agreeably surprised how a veneer of paper will toughen and stiffen balsa, or any thin wood for that matter.

Looking back over the rough draft for this article it occurred to me that the newcomer might be tempted to use Red Pine or Oregon Pine as a block for the previously discussed roof of a boxcar. Both these timbers should be avoided for this or any other painted job because of the difficulty of successfully painting them, although at a pinch they can both be treated with a paper overlay as just described. Red Pine has definite uses in model making but Oregon is better left for building your railway benchwork, and the like.

One last suggestion for the beginner before we

shut up shop for this time. Forget all about working doors, hinged hatches, sliding sashes etc., etc., on your early efforts at model building. These are very nice on an exhibition model, but beginners don't usually build exhibition models, which means that every Tom, Dick and Harry gets a go at prodding said model.

To make a sliding door-runner to scale dimensions (less than $1/16"$ in 'O' gauge) and still have the door run sweetly on the runners is something you can be proud of. But assuming you do manage this, what is going to happen? Sooner or later, but probably sooner, little Willie, who is rich Aunt Millie's satanic offspring, will be joyfully wrenching your door to and fro when the door jams, and -- "well, what do you know? The door came off," remarks Aunt Millie. Far better to fix the door firmly and immovably in place and be done with it.

Yeah! I know your Hornby 'O' gauge has sliding doors, but they are "scale" 9inch deep runners, and the hinges on the swing doors would do justice to a gate on a dry dock! Messrs Meccano and Company know all about little Willie, they ought to, they make toy trains for him and his brethren!

HANDY HINT - TAIL DISCS

by Ern Mainka

Tail discs as used on the V.R. are awkward things to make. I found it hard to cut a perfect circle $1/4"$ in diameter. However, the situation is easily solved. When you complete your next loco or van, hike around to the haberdashery dept and get some SEQUINS, which are just about the right size. These sequins are metal discs with a tiny hole in the centre woven onto a thread.

A yard will cost about 2/- and will provide tail discs to fit out a whole railroad.

MEET YOUR AUTHORS

'Rick' Richardson is a Foundation Member of the Association, was it's first President, and is now first Chairman of the newly formed State Branch. He is a fulltime modeller for the Dept. of Agriculture - although he has never "professionally" modelled model railway equipment, in this sphere he is strictly on an amateur basis - and visitors will have unknowingly admired some of his beautiful entomological and other models at Melbourne Royal Shows.

He has modelled in both 1-1/4" and 16.5mm. gauges - freelance - as he believes in making a model a combination of the types of features which he most admires. At the State Branch meeting he produced an 'O' gauge and a 2'6" narrow gauge (to run on 16.5mm track) coke dump car to his own designs, which were gems, especially the N.G. job with it's underfloor detail as on the larger car. Rick belongs to that minority group of modellers known as 'Fine Scale' and I would recommend beginners who are seeking inspiration to see his work. Rick is in his early thirties.

Thanks, Rick

Now Levin, to whom has fallen the distinction of submitting the first article complete with sketches, (his own), for 'The Journal' is a Senior Technician with the P.M.G. He is in his early 20's. He models in 'O' gauge 24v. D.C. 1/4" scale and is most interested in all types and applications of automatic electric and remote control. His latest effort is a turntable to which it is only necessary to direct a loco and the turntable will then take over, halt the loco until the table has aligned itself with the track of the incoming loco, will then

control the loco aboard itself, after which it revolves and does so until it has selected the first unoccupied stall, at which it stops, then shunting the loco into the engine shed. To date Nev. has an 'N', an 'A2', an 'E' and 2 'R's' building, besides an assortment of rolling stock, mostly freight.

Thanks again, Nev.

TURBO-TRANSMISSION FOR DIESELS by David Gross.

Amongst the developments in railway transportation is an item which may be an improvement on the now glamourised diesel-electric locomotives. It is a new system of turbo-transmission for diesel motors. For years Engineers have sought a means of resilient coupling between the diesel motor and wheels, and now it is believed that a system of hydraulic, turbo-transmission is the answer to that problem. The only controls necessary are an accelerator, reverse lever and brake. The principle is that the prime mover drives a turbine impeller which throws oil against a runner which is connected mechanically to the wheels. It is claimed a higher tractive effort can be developed for any axle loading, wheel diameter and rail condition than with any other form of mechanical transmission.

On an overload the system does not fuse as is possible in diesel-electric types and there is no expensive electrical equipment to be serviced. Since oil is the transmission medium, very little wear is suffered by the vital parts which transmit power. Capable of a very high torque conversion ratio, this form of transmission gives a high tractive effort on starting and steep gradients, and it is possible that great use of it will be made in the not too distant future.

HOW TO MAKE YOUR OWN AUTOMATIC, 'O' GAUGE, COLOUR-LITE SIGNALS

by N. Levin

SCALE

The scale of these signals has been increased to allow globes to be fitted that are more in keeping with the pocket than using the grain of wheat type of globe.

Grain of wheat type price approx. 4/6d
Magnifying head type " " 9d

MATERIALS:

These signals may be mass produced from flat tinplate, brass or copper sheet approx. 26ga. Tinplate is the cheapest material as this can be salvaged from Mum's old fruit, soap or jam tins.

5/16" dia. brass tube (when purchasing this take a globe with you and make sure the head of the globe will fit in the bore of the tube.)

1/4" dia. brass tube

3/16" dia. brass tube for masts.

1/16" strip tinplate.

7mm. ladder strip.

1 diamante for marker light.

TOOLS:

The tools required are those found in most of our workshops, with the exception possibly of a small, flat chisel approx. 1/4" dia. which may be filed from a piece of Stubbs Silver Steel, hardened and tempered. Also for cutting holes in tinplate, punches make a neater job than drilling, so one 3/16", and one 7/16" will be required, although this may be overcome by using a different method of construction.

CONSTRUCTION:

To save time in marking out when mass-producing jobs, make a template or pattern of the

job, then simply scribe around it and there it is. Another idea for this work would be to soft solder the number of bits of tinplate together (say ten pieces of plate for 10 signals) mark out the shape on top, drill all holes then cut and file to shape, melt them apart and simply clean off the excess solder and burrs.

BACKGROUND - Sketch 1:

Whichever method you use, and you may combine both, (i.e. make a template and use this to mark out on the laminated block of tinplate), mark out the shape in Sketch 1 to the sizes shown. Punch or drill the $7/16$ " dia. hole. Hold job in vise = Sketch 6 - and use small chisel to remove rectangular portion. To do this use top of the vise as a guide, and keeping the waste metal out of the jaws, gradually shear along the line until the section is removed, rotating the job in the vise as the chisel arrives at each corner. If you have the plates soldered together drill $7/16$ " dia. hole, then remove waste with slitting saw, and file true. Finally finish outline to shape with saw and file.

HOOD - Sketch 2:

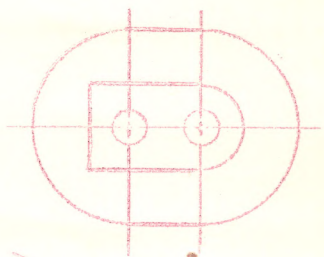
Mark out shape in Sketch 2, cut out and clean up. Now with a piece of $3/8$ " dia. rod held in vise, band hood so that sides remain parallel, and same length, as in Sketch 7.

FACE - Sketch 3:

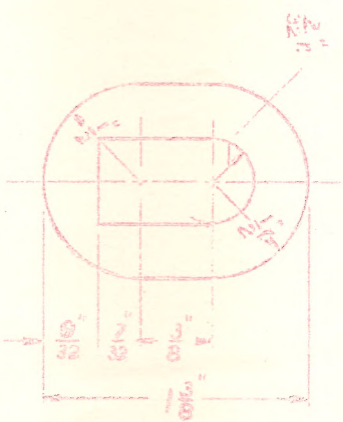
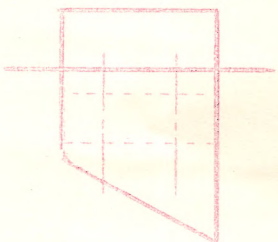
Mark out shape in Sketch 3, drill or punch $3/16$ " dia. holes, cut to shape and bend 90° along broken line. This can be done by lowering the punched section into the vise, to the line, then tap over with hammer.

LAMP COVER - Sketch 4:

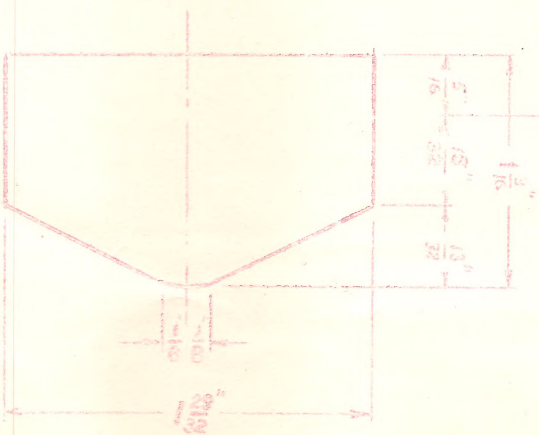
This cover relies on the flanges to hold it



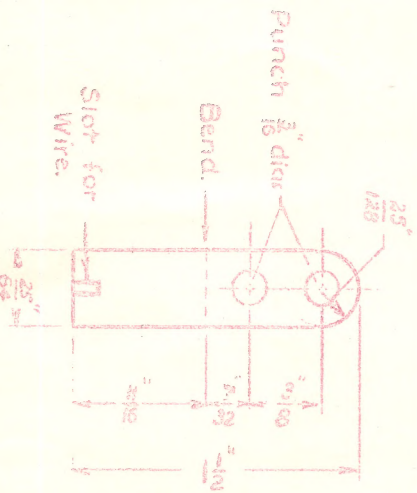
Assembly.



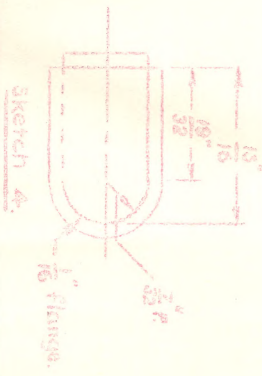
Sketch 1.



Sketch 2.



Sketch 3.



Sketch 4.

Note: For scale see description.

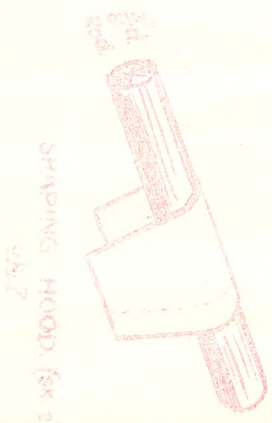
SIGNALS - COLOUR-LITE	
2 ASPECT, VR, TYPE "R" -	
"O" GAUGE	Scale: Full Size
DRAWN BY NILEVIN 2.3.53	
FOR USE BY AMRA.	



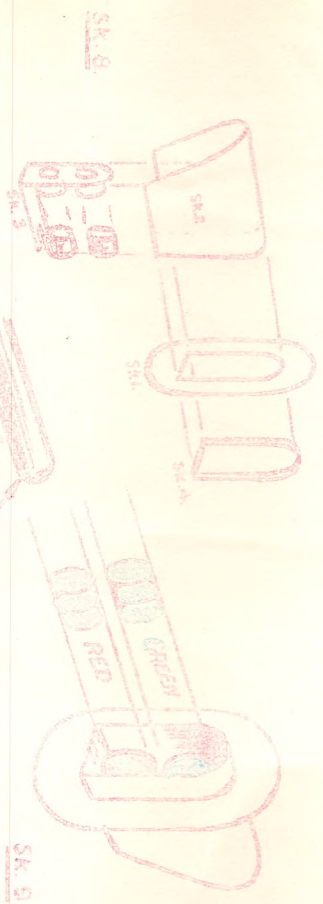
FLAT CHISEL.
SK. 5



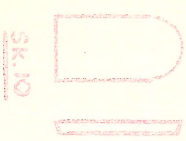
CUTTING OUT.
SK. 5



SHAPING HOOD. (SK. 6)



SK. 8.



SK. 10



SK. 11.



SK. 12.

in place. To make it easy to form the curved flange, make a former out of a piece of $1/8"$ or $3/16"$ mild steel plate and chamfer the edges, as in Sketch 10, so that the metal can be turned over at right angles - the chamfer allows for spring. Now mark out and file tinplate to shape as in Sketch 4. Place the former we made on the fold lines on the tinplate, catch this in the vise and bendover side lightly, as in Sketch 11. Now do the same all round until the flange is at right angles.

SPECTACLE HOLDERS

To overcome the difficulty of holding spectacles in position, I use this method:

Take the $5/16"$ dia. brass tube and saw off squarely, $2\frac{1}{4}"$ long ferrules, two for each aspect.

Behind each $3/16"$ hole in the face, solder one of these ferrules.

ASSEMBLY - Sketch 8

The assembly of the signal unit is as in Sketch 8, i.e.:

Solder FACE into HOOD - be careful or the solder will melt that holding the ferrules.

Slide BACKGROUND into position - check for square, and solder.

Into TOP FERRULE press 3 spectacles punched from GREEN celluloid.

Into LOWER FERRULE press 2 or 3 spectacles punched from RED celluloid.

Take 2 magnifying head globes of 2.2v, unsolder leads to screw base, break screw base off with pair of pliers, tin leads, solder one side of the globe lead to the signal hood, push nose of globe into ferrule and solder other lead to thin plastic or cotton-covered wire, (one wire to each globe's free lead, i.e. 2 wires will be coming away from your signal head), lead wires in through slot

in the bottom of the face.

Now press the lamp cover into position.

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The drawings and dimensions for a Three-aspect signal, and details of the mast and ladder superstructure for both signals will continue in the next issue of 'The Journal'.

AUSTRALIAN REGISTER OF MODEL RAILWAY NAMES

AMRA, is compiling an Australian Register of Model Railroad NAMES, and we hope eventually to have recorded the Name of every Model Railway layout in the Country.

Co-operate in this, chaps, by sending in to the REGISTRAR: DAVID GROSS, 13 HEATH STREET, SANDRINGHAM, S.E., VIC.

the NAME you have given your layout, also the NAMES of any of your friends' layouts who may not be in AMRA.

Particulars we ask are:

Name and address of Modeller.

Name of layout for Registration.

Approximate Date claimed as to when your

Model Railway received it's Name.

and Please Remember,

we want Names of layouts belonging to chaps not in AMRA., as well as members. Thanks, fellers.

Well, chaps, there it is, 'The Journal' is up to 24 pages and almost up-to-date---next Issue definitely will be!---thus fulfilling our aim to provide a "Bigger and Better 'Journal', 'On Time all the Time'".